I claim:

1. A method of manufacturing a variable length fuel cell bipolar separator plate, comprising the following steps:

providing a sheet of material having a fixed width;

passing the sheet through a tool a predetermined distance;

forming a pattern on a central portion of the sheet with the tool to define a segment along the length of the sheet, the pattern including ribs defining a fuel flow path on a first side of the sheet and an oxidant flow path on an opposed second side of the sheet;

passing the sheet through a tool a predetermined distance;

repeating the steps of forming the pattern on the sheet and passing the sheet through the tool until the sheet possesses a desired length; and

cutting the sheet to the desired length.

2. The method of claim 1, wherein the pattern further includes a first mating pair of apertures in a first outer portion of each segment and a second mating pair of apertures along an opposed second outer portion of each segment.

3. The method of claim 2, further comprising the steps of:

folding the first outer portion over itself such that the first pair of apertures are aligned with one another to form an inlet for the fuel flow path; and

folding the second outer portion over itself such that the second pair of apertures are aligned with one another to form an outlet for the fuel flow path.

4. The method of claim 2, wherein the pattern further includes a plurality of dimples in the first and second outer portions such that when the first and second outer portions are folded over upon themselves a fluid flow path is formed within the folded over portions.

5. The method of claim 2, wherein the pattern includes at least one additional mating pair of apertures in the first and outer portions of each segment.

6. The method of claim 3, further comprising the steps of securing a seal member on the second side of the sheet proximate a first edge thereof to define an inlet for the oxidant flow path; and securing

a seal member on the second side of the sheet proximate an opposed second edge thereof to define an outlet for the oxidant flow path, each seal member including an aperture aligned with a respective pair of apertures when the seal member is secured to the sheet.

7. The method of claim 6, further comprising the step of eyeleting the aperture of each seal member to one aperture of the respective pair of apertures with which the seal member aperture is aligned.

8. The method of claim 7, wherein the pattern further includes a plurality of dimples in the first and second outer portions such that when the seal members are secured to the sheet a fluid flow path is formed between the seal members and the plate.

9. The method of claim 6, wherein the pattern includes a dividing rib between adjacent segments, the dividing rib defining a flow channel in fluid communication with the inlet and outlet of the oxidant flow path.

10. The method of claim 1, further comprising the step of forming a coolant flow path within each segment.

11. The method of claim 10, wherein the coolant flow path is formed by mating two sheets having patterns together, the ribs of one sheet having a height greater than the ribs of the other sheet such that when mated together a plurality of channels extend between the two sheets to form the coolant flow path.

12. The method of claim 1, wherein the ribs extend substantially perpendicular to the direction the sheet passes through the tool.

13. The method of claim 1, wherein a portion of each end of the plate is folded over onto itself to form a seal along the respective end of the plate.

14. A fuel cell bipolar separator plate comprising, in combination:

a first plate having a first surface and an opposing second surface;

a plurality of ribs on the first plate defining a fuel flow path along the first surface of the first plate;

a second plate having a first surface and an opposing second surface;

a plurality of ribs on the second plate defining an oxidant flow path along the second surface of the second plate;

wherein the ribs on one of the first and second plates have a height different than the ribs on the other plate, the first and second plates abutting one another and defining a coolant flow path between the first and second plates.

15. The separator plate of claim 14, wherein the fuel flow path, oxidant flow path, and coolant flow path are substantially parallel to one another.

16. The separator plate of claim 14, wherein the fuel flow path, oxidant flow path, and coolant flow path are substantially perpendicular to a direction of manufacture of the first and second plate.

17. The separator plate of claim 14, further comprising seal areas along each side edges of the first plate.

18. The separator plate of claim 17, wherein the seal areas are formed by folding over a portion of the first plate onto itself.

19. The separator plate of claim 18, wherein the seal areas include a plurality of dimples defining a fluid flow path within the folded over portions of the plate.

20. The separator plate of claim 18, wherein each segment further includes at least one fuel inlet in one seal area and at least one corresponding fuel outlet in the opposing seal area of that segment, the inlet and outlet communicating with one another through the fuel flow path of that segment.

21. The separator plate of claim 20, wherein each fuel inlet and fuel outlet comprises a mating pair of apertures formed in the seal areas such that the mating pair of apertures line up with one another when the first plate is folded over onto itself.

22. The separator plate of claim 18, wherein each segment further includes an oxidant inlet in one seal area and a corresponding oxidant outlet in the opposing seal area of that segment, the oxidant inlet and outlet communicating with one another through the oxidant flow path of that segment.

23. The separator plate of claim 22, further comprising an oxidant seal member secured along each edge of the plate to define the oxidant inlet and oxidant outlet

24. The separator plate of claim 23, wherein the seal areas include a plurality of dimples defining a fluid flow path between the seal members and the plate.

25. The separator plate of claim 14, wherein a central portion along each end of the plate is folded over onto itself to form a seal along the respective end of the plate.

26. The separator plate of claim 25, further comprising a recess formed along portions of each end of the plate outward of the central portion and shaped to receive the central portions when the central portions are folded over.

27. The plate of claim 18 wherein each segment further includes at least one coolant inlet in one seal area and at least one corresponding coolant outlet in the opposing seal area of that segment, the coolant inlet and coolant outlet communicating with one another through the coolant flow path of that segment.

28. The separator plate of claim 27, wherein each coolant inlet and coolant outlet comprises a mating pair of apertures formed in the seal areas such that the mating pair of apertures line up with one another when the first plate is folded over onto itself.

29. The separator plate of claim 14, wherein the ribs of the first and second plate are of a height sufficient to withstand a compressive force applied to a fuel cell stack comprising a plurality of first and second plates.

30. The spearator plate of claim 14, wherein the ribs of the first and second plate are of a height sufficient to withstand a differential pressure between adjacent fuel, oxidant and coolant flow

chambers, and insufficient to withstand a compressive force applied to a fuel cell stack comprising a plurality of first and second plates, in order to minimize material used to form the first and second plates.